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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,346	12/11/2001	Jean-Paul Michaut	P21328	8305

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RESTON, VA 20191

EXAMINER
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ADDIE, RAYMOND W

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 03/31/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/913,346

Applicant(s)

MICHAUT, JEAN-PAUL

Examiner

Raymond W. Addie

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10, 12-15, 18, 24-29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10, 12-15, 18, 24-29, 31, 32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>translation of EP 605,377</u> .        |

### DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 12-15, 25, 28 are rejected under 35 U.S.C. 102(b) as being anticipated by

Non-patent literature to Van Bochove G G; "NIEUW CONCEPT VOOR ZEER OPEN ASFALTBETON" WEGEN, Vol. 64, No. 6, 1 June 1990 (199990-06-01) pages 30-31.

Van Bochove, as cited in an International Search report issued May 12, 2000 discloses a bituminous draining roadway comprising:

An upper partial layer (2), having a particle size distribution in the range of 11/16 mm or 16/22 mm.

A lower partial layer (1), having a particle size distribution in the range of 4/8 mm.

See highlights added to Fig. 1 by the Examiner; as well as page 5 of the translated document, previously provided by the Examiner.

Wherein the upper layer further comprises a modified bituminous binder, such as rubberized asphalt having a filler material in the size range of 0/8 mm, and an optional 2<sup>nd</sup> filler material, such as sand.

Further wherein a ratio of the particle size distribution of the lower layer and the particle size distribution of the upper layer is in the range of 3:1 to about 4:1, such that 16/22mm : 4/8 mm is in the range of 3:1 to about 4:1.

Although Van Bochove does not disclose the constituent amount of filler material in the mixture, 3 significantly different particle sizes are clearly evident in Fig. 1 and highlighted by the Examiner. Further, Ban Bochove further discloses the porosity of the upper layer can be affected by varying or omitting the sand fraction of the mixture. Hence, it is inherent that since varying the quantity of sand in the mixture will affect the porosity of the upper layer, then the sand fraction must be greater than 2% by weight. Otherwise omitting a sand fraction that is less than 2% by weight would not have any affect on the porosity of the upper layer. See Page 7 of the translated document, previously provided by the Examiner.

In regards to Claims 12-15 Van Bochove discloses the particle sizes of the lower layer can be in the range of 11/16 mm or 16/22 mm and can consist of broken stone, gravel and/or crushed rock. The particle sizes of the upper layer can range from 4/8 mm and can consist of small stones. Both or either layer can have a single-grained mixture,

which inherently requires at least 95% of the aggregate mixture to be of a single grain size.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 24, 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over NPL to Van Bochove in view of Hendriks et al. # 5,910,212.

Van Bochove discloses a Very Open Asphalt composition (voac) but does not disclose the void ratio of the asphalt composition. However, Hendriks et al. positively recites Very Open-graded asphalt compositions are known to have a void content ranging between 20-30% and can be applied to a roadway at a temperature less than 140° C. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to provide the Very Open Asphalt composition of Van Bochove with a void content in the range of 20-30%, as taught by Hendriks, in order to maximize the porosity and thus the water draining capability of the roadway. See Hendriks Col. 3, Ins. 18-22; col. 4, Ins. 5-11.

4. Claims 26, 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over NPL to Van Bochove in view of Kim et al. # 5432213.

Although Van Bochove does not disclose the preferred thickness for each of the layers of the roadway being formed, Van Bochove does disclose the theoretical maximum thickness is not necessary. Further, Kim et al. teaches water-permeable asphalts "voac" can be formed in continuous, multiple, stacked layers, wherein the top(wear) coarse can be between .05-3 cm; and a lower (base) coarse can be between .55-5.5 cm; in order to balance the competing needs of strength and porosity. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to make the roadway of Van Bochove, in layers greater than ½ mm and less than 4cm thick, in order to provide sufficient strength, in very open concrete mixtures. See Kim et al., Col. 4, Ins. 19-35; Fig. 1.

5. Claims 10, 12-15, 18, 24, 25, 28, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over NPL to Van Bochove in view of EP 0605377 A2 reference to Bredael.

Van Bochove, as cited in an International Search report issued May 12, 2000 discloses a bituminous draining roadway comprising:

An upper partial layer (2), having a particle size distribution in the range of 11/16 mm or 16/22 mm and a modified bituminous binder, such as rubberized asphalt.

A lower partial layer (1), having a particle size distribution in the range of 4/8 mm.

See highlights added to Fig. 1 by the Examiner; as well as page 5 of the translated document, previously provided by the Examiner.

Wherein a ratio of the particle size distribution of the lower layer and the particle size distribution of the upper layer is in the range of 3:1 to about 4:1, such that 16/22mm : 4/8 mm is in the range of 3:1 to about 4:1.

Although Van Bochove does not disclose the constituent amount of filler material in the mixture, Bredael teaches a surface draining layer having a granular material in the range of 6/17mm and 0.08/2 mm, such as fly ash and a modified bituminous binder, such as SBS and an additional 3-8% by weight of filler material having a particle size of less than 0.08mm.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the Very Open Asphalt of Van Bochove, with a quantity of filler material in the range of 3-8% by weight and SBS, as taught by Bredael, in order to reduce road noise. See Translated document provided by the Examiner herein, Pages 2-5,

In regards to Claims 18, 24 Van Bochove discloses the use of a Very Open Asphalt composition (voac) but does not disclose the void ratio of the asphalt composition. However, Bredael teaches that VOA Compositions desirably have a void content between 15-30% and the modified bituminous binder is added in the range of 2-7% by

weight. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the VOAC of Van Bochove with a void content of at least 25% and a bituminous binder in an amount greater than 4% by weight, as taught by Bredael, in order to prevent pooling of surface water on the roadway. See page 5 of the translated document.

#### ***Response to Amendment***

7. The amendment to claim 32 has overcome the Objection to Claim 32 put forth in the Last Office Action. However, the rejection of Claim 32 as being unpatentable under 35 U.S.C. 103(a) is repeated above.

Further the cancellation of claims 11, 30, 33-36 without prejudice or disclaimer is acknowledged.

#### ***Response to Arguments***

8. Applicant's arguments filed 2/27/2004 have been fully considered but they are not persuasive.

Applicant argues This rejection is respectfully traversed. In particular, with regard to the rejection of the independent claims, the Examiner appears to be of the opinion that the sand mentioned in BOCHOVE qualifies as the filler material recited in the rejected



claims. However, it is clear that according to BOCHOVE, the sand is not a filler material, but constitutes a part (fraction) of the aggregate. This becomes clear from pages 7 and 8 of the English language translation of BOCHOVE relied on in the rejection.

For example, at page 7, first full paragraph, of the English language translation of BOCHOVE, it is stated: Given the fine grain-size of the upper layer mixture, it is advisable to keep the porosity as high as possible, and the resistance to flow - as low as possible. This can be achieved by omitting the sand fraction in the mixture,

Emphasis provided. It is apparent that the mixture in the above passage from BOCHOVE is the aggregate of the upper layer and that the sand is a fraction of this aggregate (mixture), i.e., not a filler material. In fact, BOCHOVE does not appear to teach or suggest the use of a filler at all. This is further confirmed by the fact that wherever BOCHOVE refers to a mixture in the context of the road pavement itself this mixture" is an aggregate. See, for example, page 4, 3rd and 4th paragraphs from the bottom, page 5, first full paragraph, page 7, 4<sup>th</sup> paragraph, and page 8, second paragraph of the English language translation of BOCHOVE. For this reason alone, the rejection of the present claims over BOCHOVE is without merit and should be withdrawn.

However, none of the claims nor the specification disclose what substances constitute a filler material.

In fact, Applicants specification discloses the filler portion can be eliminated. See page 4, lines 1-16, which discloses the use of a monogranular particle size **without fines** and that the upper layer may **contain mineral or organic additives**.

Hence, the Applicants broad use of the phrase “filler material” cannot preclude the teachings of the prior art. The fact that Van Bochove discloses the use of sand cannot be ignored.

Since, sand is well known to have a particle size of 0.425mm-2.0mm which, when compared to the particle size of the upper layer (4/8mm); it is clear that sand constitutes a “filler material”.

Still further, Van Bochove clearly discloses the use or omission of sand will have an affect on the porosity coefficient and noise coefficient of the roadway. It is inherent that the use of sand to affect the porosity and the noise of the roadway would require the use of more than 2% by weight of sand, in order to affect the porosity as disclosed.

In regards to Applicant's suggestion that the sand cannot be a filler material because the sand is a fraction of this aggregate (mixture), i.e., not a filler material is based on the citation of Van Bochove, quoted by the Applicant...

"Given the fine grain-size of the upper layer mixture, it is advisable to keep the porosity as high as possible... This can be achieved by omitting the sand fraction in the mixture".

Does not suggest that the sand is not a filler material simply because the sand must be combined into the mixture in order to be present in the mixture.

Is the Applicant suggesting the filler material disclosed in the instant application is separate from the bituminous mixture claimed? If so how is the claimed filler material prevented from being combined with, and constituting a fraction of, the claimed bituminous mixture of the upper level?

Van Bochove very clearly discloses the upper layer comprises small stones 4/8 mm in diameter and that a sand fraction can be added or omitted to affect porosity of the upper layer.

Therefore, the arguments put forth are not persuasive and the rejection is upheld.

Applicant further argues "The rejection of claim 11 merely asserts that it would allegedly have been obvious or inherent to one of ordinary skill in the art that BOCHOVE clearly contemplates a variety of embodiments having different particle sizes based on noise and water drainage characteristics", without supporting this contention by referring to any literature.

However, simple mathematics will show that a particle size ratio of 11-16mm : 4-8mm; is in the range of 2.75 : 1 and 4 : 1. And that a particle size ratio of 16-22mm : 4-8mm Is in the range of 4 : 1.

Therefore the argument is not persuasive.

Applicant argues against the combination of Van Bochove in view of Hendriks et al. by stating "Bochove fails to disclose the void ratio of the Very Open Asphalt, but alleges that Hendriks et al. discloses an open graded asphalt composition having void content ranging between 20-30% and that the open graded asphalt can be applied at a temperature of less than 140 degrees Celsius".

This is in fact explicitly recited in the Hendriks et al. patent cols. 3-4.

Therefore it is obvious that open graded asphalts include Very Open Asphalt compositions and that such compositions would have a void ratio greater than 20%.

Applicant further argues "Applicant notes that the rejection of dependent claims 18, 24, 29 under 35 U.S.C. 103(a)...the rejection of claims 10-15, 25, 28 none of the present independent claims is anticipated...Hendriks et al. does not cure the deficiencies of Bochove set forth above".

However, with respect to the 35 U.S.C. 102(b) rejection of amended Claim 10, 12-15, 25, 28 the Van Bochove reference is without deficiency, as put forth above.

The Applicant argues against the rejection of claims 26, 27 by stating "Bochove fails to disclose the preferred thickness for each of the layers of the roadway and only teaches that the theoretical maximum thickness is not necessary".

To this the Examiner concurs.

The Applicant further argues "The rejection further asserts that it would allegedly have been obvious to one of ordinary skill in the art to make the roadway of Bochove in layers greater than .5mm and less than 4 cm thick...without supporting this allegation by any publication".

However, in the Last Office Action the Applicant was directed to "See Kim et al., Col. 4, Ins. 19-35; Fig. 1". Figure 1 clearly illustrates the top layer (1) being between .5-30mm and the lower layer can have a thickness of .55-5 cm. Col. 4, Ins 19-35 clearly recite "high strength water-permeable resinous composition for road paving...can be made...of 5-30mm in thickness...then the...asphalt layer (2) may be of 30-55mm in thickness".

Hence, a finding of fact was established in the Last Office Action regarding the teachings of the cited prior art, as opposed to an unsupported allegation as argued.

Applicant further argues "that regarding the thickness ranges recited in claims 26 and 27, the rejection apparently relies on disclosure of KIM et al. which relates to the road blocks for footpaths as illustrated in Fig. 1 of this document, whereas the resinous pavement which is illustrated in Fig. 2 of this document and which would appear to be more closely related to the present road blanket than the roadblocks of Fig. 1, has thickness ranges of 3-5 cm and 5-20 cm, respectively, i.e., completely outside the ranges recited in claims 26 and 27 (1.5-2 cm and 2.5-4 cm, respectively). For this reason alone, the rejection of claims 26 and 27 is not tenable".

However, Claims 10, 25 positively recite "A bituminous draining road blanket comprising an upper partial layer and a lower partial layer".

Nothing in the claims precludes the use of blocks or restricts the invention to a continuous, uninterrupted layer of bituminous paving material.

Further Kim et al. clearly discloses and positively recites "it can be made into road blocks...consisting of a water-permeable resinous road paving upper layer (1)...and water permeable...asphalt lower layer (2).

Therefore, the argument is not persuasive and the rejection is upheld.

Applicant argues against the rejection of claims 31, 32 by stating

"Bochove does not render the subject matter of any of the present independent claims unpatentable...Bredael does not cure any of the deficiencies of Bochove...The rejection of any claim that depends from claim 10 is without merit for this reason alone".

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

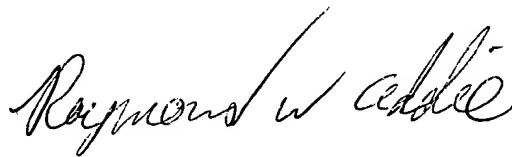
The arguments put forth with respect to claim 10 have been addressed in the above paragraphs.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 703 305-0135. The examiner can normally be reached on 8-2, 6-8.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 703 308-3870. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Raymond W. Addie". The signature is fluid and cursive, with the first name "Raymond" being more prominent than the last name "Addie".

**Raymond W. Addie**  
**Patent Examiner**  
**Group 3600**

**3/27/2004**